Iwao Hino* and Ken Katumoto*: **On *Muroia*, a New Genus of the Lophiostomataceae**

日野　巖*・勝本　謙*: 新属ムロイアについて

In the course of investigation into the fungi parasitic on Bambusaceae, the writers fortunately found a species of the Lophiostomotaceous fungi hitherto unknown. The fungus was found on the culm of *Sasa kurilensis* Makino et Shibata which was collected and kindly sent by Mr. Hiroshi Muroi, a taxonomist of the Bambusaceous plants.

The writers here wish to express their heartiest gratitude to Mr. Hiroshi Muroi for his kindness in offering the material to the writers at their disposal.

Morphology of the fungus The fungus in question is parasitic on the lower part of the half-dead culm of *Sasa kurilensis* Makino et Shibata on Mt. Ryūtōzan of Ugo Province. It forms a black pustule of 2-6 mm long with slit-like openings, and is longitudinally arranged somewhat in rows on the culm.

The perithecia of the fungus are solitary, gregarious, subepidermal, later erumpent, subglobose, more frequently somewhat cuboid, constricted at the upper portion, flattened at the appex, subcoriaceous, glabrous, fuligineous, 250-380μ in diameter, 280-400μ in height, and have no stromata. The contexture is pseudoparenchymatous, and composed of the cells polygonal or subglobose and somewhat elongate at the basal portion. The ostioles are linearly dehiscent. The asci cluster at the bottom of the perithecium, and are clavate or cylindric-clavate, rounded at the apex, stipitate, 163-211 × 41-49μ, and have respectively eight spores. The paraphyses are filiform, simple, and 180-250 × 3-4.5μ. The ascospores are in two rows, oblong or elongate-oblong, continuous, rounded at both ends, frequently curved, smooth, hyaline, later subhyaline and yellowish, granular at first, later 1-guttate, 42.4-58.7 × 14.7-17.6μ, and have mucous sheath.

Taxonomic discussion on the fungus The fungus in question seems to belong to the family Lophiostomataceae in consideration of its perithecial structure and linear ostiole. It has a close relation to the amerosporous genus *Lophiella* Saccard of Lophiostomataceae, though the latter genus *Lophiella* has the superficial perithecia which are embedded in the substratum merely at the basal portion and the dark-brown ascospores without mucous sheath.

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The writers' fungus is distinguishable from the genus *Lophiella* in respect to the subepidermal perithecia and the hyaline ascospores. There are no genera to which the writers' fungus is to be belonged.

The writers, then, wish to establish a new genus for the fungus in question, and name it *Muroia*. The new generic name is proposed in honour of Mr. Hiroshi Muroi who collected the fungus for the first time in the world.

The comparison of the principal characters between the genus *Muroi* and the genus *Lophiella* is briefly shown in the following table:—

	Muroia	*Lophiella*
Perithecia	without stroma solitary, gregarious embedded, later erumpent glabrous	without stroma solitary, gregarious superficial, embedded at the basal portion glabrous
Ascospores	1-celled oblong or elongate-oblong smooth hyaline, later subhyaline with mucous sheath	1-celled oblong or spindle-form smooth dark-brown without mucous sheath
Asci	clavate or cylindric-clavate 8-spored in two rows	8-spored
Paraphyses	filiform, simple	filiform, simple
Habit	saprophytic or sub-saprophytic	saprophytic

The genus *Muroia* is very significant, as the genus is characterized by the presence of 1-celled hyaline ascospores. In the key to the Lophiostomataceous genera according to Clements and Shear (Genera or Fungi, p. 82, 1954), the column in which the genus *Muroia* is to be placed is black, and noted with the words "not represented," probably because the corresponding genera had not been discovered till that time.

On accent of the discovery of the genus *Muroia* by the writers, the key to the Lophiostomataceous genera should be amended and completed as follows:—

A. Ascospores 1-celled
  1. Ascospores hyaline ....*Muroia*
  2. Ascospores dark ....*Lophiella*
B. Ascospores 2-celled

- 1. Ascospores hyaline
  - a. Perithecia hairy .... *Lophiotricha*
  - b. Perithecia glabrous .... *Lophiosphaera*
- 2. Ascoporea dark
  - a. Perithecia with a subicle.. *Byssolophis*
  - b. Perithecia without a subicle... *Schizostoma*

C. Ascospores x-celled

- 1. Ascospores hyaline.. *Lophiotrema*
- 2. Ascospores dark .... *Lophiostoma*

D. Ascospores muriform

- 1. Ascospores hyaline
  - a. Ascospores long-caudate at base .... *Sampaioa*
  - b. Ascospores not appendaged .... *Lophidiopsis*
- 2. Ascospores dark... *Platystomum*

E. Ascospores acicular to filiform .... *Lophionema*

The technical description of the fungus The technical description of the new genus *Muroia* is as follows:—

Muroia Hino et Katumoto, gen. nov.

Peritheciis gregariis, submersis in hymeniis, mox erumpentibus, subcoriaceis, atro-fuligineis, subglobosis, apice applanatis colliculosisque, glabris; ostiolis linearibus; ascis basilaris, clavatis vel cylindro-clavatis, breviter stipitatis, octosporis; paraphysibus filiformibus, simplicibus; ascosporis distichis, oblongis, continuis, frequenter curvatis, levis, hyalinis vel subhyalinis, mucosis.

Typus: *Muroia nipponica* Hino et Katumoto.

The technical description of the new fungus is as follows:—

Muroia nipponica Hino et Katumoto, spec. nov.

Peritheciis gregariis, longitudinaliter serialis et 2–6 mm longis, submersis, dein erumpentibus, subglobosis, mox paulo cuboideis, apice applanatis colliculosisque, glabris, subcoriaceis, atro-fuligineis, 250–380μ altis; contextu pseudoparenchymatico, cum cellulis polyhedricis vel subglobosis, ad basim oblongatis, 9–12μ diam.; ostiolis lineariter dehiscentis; ascis clavatis vel cylindro-clavatis, apice rotundatis, breviter stipitatis, octosporis, 163–211 × 41–49μ; paraphysibus filiformibus, simplicibus, 180–220 × 3–4.5μ; ascosporis distichis, saepe utrinque rotundatis, rectis vel frequenter curvatis, levibus, hyalinis vel subhyalinis, guttulatis, dein uniguttatis, semper mucosis, 42.4–58.7 × 14.7–17.6μ.

Hab. in culmis sub-emortuis *Sesae kurilensis* (Nemagari-take). Nyūtōzan, Prov. Ugo, Japonia (Aug. 4, 1957. H. Muroi—Typus in Herb. Fac. Agr. Univ. Yamaguti).

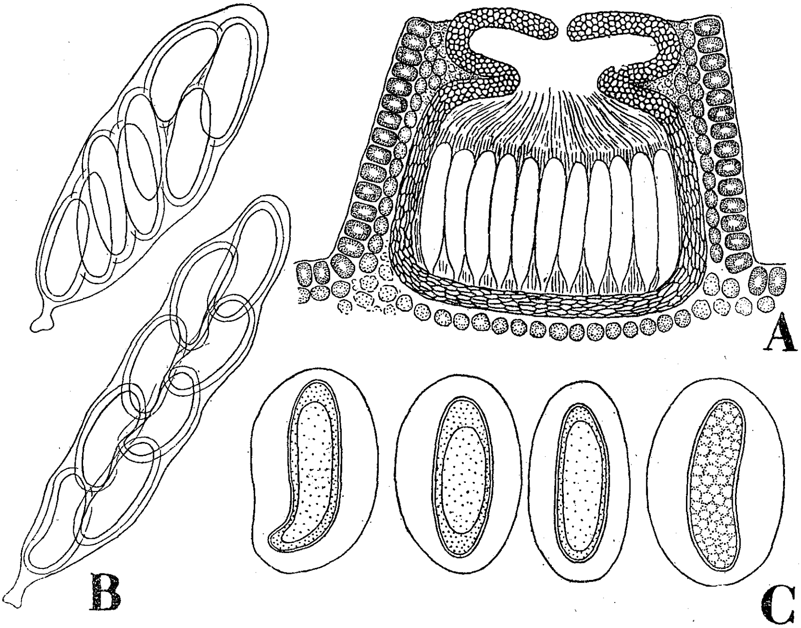

Fig. 1. *Muroia nipponica* Hino et Katumoto A. perithecium (×150) B. asci (×300) C. ascospores (×500)

筆者等は，多年，竹類に寄生する菌類の分類学的研究を行つているが，室井綽氏が1957年8月4日秋田県乳頭山で採集したネマガリタケ稈上の一菌を鏡検した結果，学界未知の新属に属する菌であることを認めた。

本属は多年学界において発見を要望されていた Lophiostomataceae 科の一属であり，分類学上の興味ある属のひとつである。筆者等は採集者室井綽氏を記念して *Muroia nipponica* Hino et Katumoto, n. g., n. sp. と命名し，その属徴と種徴を記述した。